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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/032,097

12/31/2001

Sang-Ho Lee

Q67012

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7590

09/23/2005

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EXAMINER

BHATIA, NEERAJ R

ART UNIT

PAPER NUMBER

2661

DATE MAILED: 09/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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## Office Action Summary

Application No.

10/032,097

Applicant(s)

LEE ET AL.

Examiner

Neeraj Bhatia

Art Unit

2661

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 31 December 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-7, 10-12 and 14 is/are allowed.
- 6) ☒ Claim(s) 8, 9 and 13 is/are rejected.
- 7) ☒ Claim(s) 10-12 and 14 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date: \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date: \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 8 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Sethuram (Patent No. 6,058,114).

Regarding claim 8, Sethuram discloses a method and apparatus for ATM cell scheduling and traffic control (column 7 lines 28 and 29) where the scheduling of the ATM cells may be adjusted due to type of service (column 8 lines 45-47). Sethuram discloses a method that generates service information, such as traffic type (Fig 7D column 9 lines 9-16), a priority of service provision (column 8 lines 26-30), and an expiration time (column 9 lines 17-31). The sorter (1004 in Fig 10) in Sethuram's scheduler (904 in Fig 9) evaluates the values stored in the VC Time Table (921 in Fig 10) in order to prioritize and schedule an ATM cell for transmission. These values preferably include the expiration time (column 12 lines 15-22). The cell that is to be serviced is outputted by the UTOPIA output interface (912 in Fig 9) from the SAR controller (702 in Fig 9) to the physical layer device (806 in Fig 9).

With respect to claim 9, Sethuram discloses a method for ATM based delay adaptation according to traffic type as described above and discloses a step where the cell and service information is stored. Sethuram shows in Fig 7A and column 7 lines

Art Unit: 2661

44-57 a segmentation and reassembly (SAR) controller (702) that addresses a partition of memory locations 711-722 within a memory. The memory locations are referred to as the VC Time Table (703). Each memory location may contain a VCI number 724, which represents an ATM cell for the given virtual connection. In Fig 7D and column 9 lines 9-14 we can see the rate values that were converted to periods and other virtual connection parameters that may be computed by the SAR and maintained for each active virtual connection within the VC Parameter Table 705. Included in this list is traffic type.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sethuram in view of Stacey (Patent No. 6,834,053).

Sethuram discloses all that is in claim 8, but does not disclose a step that compares an occupancy capacity of storing means where the cell is stored, with a predetermined threshold, and then regulates the occupancy capacity below the predetermined threshold. Stacey discloses in column 17 lines 15-28 a method of monitoring congestion, where a maximum queue length is given and if they queue exceeds this max level, an alarm will be generated causing all data units to be

Art Unit: 2661

discarded. A stop signal is also applied to the packet scheduler to temporarily halt it from scheduling any further data units. It would have been obvious to one skilled in the art at the time of the invention to include this method of monitoring congestion in Sethuram to insure that the VC time table and parameter table, the tables holding the service information, does not get congested.

### ***Allowable Subject Matter***

5. Claims 1 –7 are allowed.
6. Claims 10-12 and 14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### ***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Ganmukhi (Patent No. 5,850,399) discloses a hierarchical scheduler particularly useful in an ATM network since the scheduler adapts the user traffic to the cell-based network. Milliken (Patent No. 6,526,062) discloses a system and method for scheduling and rescheduling the transmission of cell objects of different types. Snyder II (Patent No. 6,888,830) discloses various scheduling boards with priority levels used to differentiate between different traffic services. Pei in Patent No. 6,272,109 discloses an ATM scheduler supporting multiple transmission traffic types. Gemar (Patent No. 6,483,839) discloses a traffic manager coupled to a communication

Art Unit: 2661

system for scheduling transmission of information associated with a plurality of connections in the communication system.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Neeraj Bhatia whose telephone number is (571) 272-5204. The examiner can normally be reached on Monday through Friday: 8:00 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau Nguyen can be reached on (571) 272-3126. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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